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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,120	11/06/2000	Stanley W. Adermann	206966	8239

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EXAMINER

ZHEN, LI B

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,120

Applicant(s)

ADERMANN ET AL.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8 and 15 is/are rejected.
- 7) ☒ Claim(s) 2-7 and 9-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 15 are pending in the application.

Allowable Subject Matter

2. Claims 2 – 7 and 9 – 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specification

3. Applicant referred to a plurality of references in the specification: p. 10, lines 10 – 15. These references are not checked. The examiner requests a copy of the references so that they can be fully considered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Architectural Overview of Intel’s Bluetooth Software Stack” (hereinafter Intel) in view of U.S. Patent Application Publication NO. 2002/0012329 to Atkinson.**

6. As to claim 1, Intel teaches the invention substantially as claimed including a computer system having a user mode that contains an application [BTEEXEC is responsible for exposing a user-mode interface that all user-mode applications can use to access Bluetooth functionality; p. 5, paragraph 4 and 5] and a kernel mode [RFBDI is an IRP-based kernel mode interface; p. 5, last paragraph] that contains a protocol module implementing the L2CAP layer of the Bluetooth protocol [connectionless L2CAP interface, L2CAP QoS; p. 6, paragraph 1], a method of providing Bluetooth communication access to the application [applications use the Win32 Comm API for performing open, close, read, write, and flow control functions; p. 6, paragraph 3] comprising the steps of:

providing a kernel mode translation layer [BTEEXEC is responsible for exposing a user-mode interface that all user-mode applications can use to access Bluetooth functionality; p. 5, paragraph 4 and 5] between the protocol module [L2CAP, p. 5] and the application [Apps, Fig. 3; p. 4], wherein the translation layer exposes a first interface to the protocol module via a first data protocol [BTEEXEC is responsible for exposing a user-mode interface that all user-mode applications can use to access Bluetooth functionality; p. 5, paragraph 4 and 5]; and wherein the translation layer exposes a second interface via a second data protocol [L2CAP implements a second link-layer protocol to address protocol multiplexing, segmentation, and reassembly; p. 3, paragraph 5]; and

conveying an application communication from user mode to kernel mode [BTAPI provides access to features specific to Bluetooth technology in the kernel stack; p. 6, paragraph 2] such that the conveyed communication is compliant with the second data protocol [BTAPI enable access to functionality specific to Bluetooth technology from user-mode applications; p. 9, paragraph 4].

7. Although Intel teaches the invention substantially, Intel does not specifically teaches converting communication into a form that is compliant with a first data protocol and conveying the converted communication to the protocol module.

However, Atkinson teaches Bluetooth communication access to an application [Bluetooth protocol stack for operating on Bluetooth packets, the packets being transferred between an application executing on the processor and the Bluetooth baseband; p. 4, paragraph (0032)] and converting communication into a form that is compliant with a first data protocol and conveying the communication to a protocol module [converting the executable functionality according to a communications and providing the converted executable functionality directly to the at least one application program at run-time; p. 4, paragraph (0031)].

8. It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of converting communication into a form that is compliant with a first data protocol as taught by Atkinson to the invention of Intel because this allows modules with different data protocols to communicate with each other transparently.

9. As to claim 8, this is a product claim that correspond to method claim 1; note the rejection to claim 1 above, which also meet this product claim.

10. As to claim 15, Intel as modified teaches a system for radio frequency communication [Bluetooth wireless technology; see abstract, p. 1 of Intel] comprising:

a computing device associated with a Bluetooth radio frequency transmitting and receiving device [Bluetooth software support in the notebook computers; p. 1, paragraph 4 of Intel];

an application residing in the user mode of the computing device [user-mode applications; p. 9, paragraph 4 of Intel];

a user mode communication module [BTEEXEC] communicably linked to the application and adapted to receive an outgoing communication from the application [BTEEXEC is responsible for exposing a user-mode interface that all user-mode applications can use to access Bluetooth functionality; p. 5, paragraph 4 and 5 of Intel];

a kernel mode communication module [RFBDI is an IRP-based kernel mode interface; p. 5, last paragraph of Intel] adapted to receive the outgoing communication from the user mode communication module and to provide the communication as a kernel mode output [RFCOMM driver is responsible for implementing multiple virtual comm ports over RFCOMM connections; p. 5, paragraph 8 of Intel];

a translation layer residing in kernel mode, communicably linked to the kernel mode communication module [BTAPI provides access to features specific to Bluetooth technology in the kernel stack; p. 6, paragraph 2 of Intel], adapted to receive the kernel

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mode output from the kernel mode communication module [BTEXEC is responsible for exposing a user-mode interface that all user-mode applications can use to access Bluetooth functionality; p. 5, paragraph 4 and 5 of Intel] and to provide a translated outgoing communication [converting the executable functionality according to a communications and providing the converted executable functionality directly to the at least one application program at run-time; p. 4, paragraph (0031) of Atkinson]; and

a Bluetooth L2CAP-compliant protocol module residing in kernel mode for receiving the translated outgoing communication [L2CAP implements a second link-layer protocol to address protocol multiplexing, segmentation, and reassembly; p. 3, paragraph 5 of Intel], and providing an output representative of the outgoing communication for transmission via the Bluetooth radio frequency transmitting and receiving device [PPP over L2CAP is the basis for dial-up networking and PPP-based LAN access points; p. 5, paragraph 9 of Intel].

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Conclusion


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

lbz
March 9, 2004


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